762
cure his wife. When she died, he broke the taboo against eating salt and died. [263]
The fourth successful case did involve an attempt at social control. A father [784]
and daughter did not get along because the daughter was supporting the father. [626]
The daughter complained and the father threatened suicide. He repeated the
threat a day later and the daughter told him to do whatever he wanted. The
father took his gun and shot himself below the chin. This method of suicide
is not typical and was clearly inappropriate, because it gave the daughter no
chance to change her behavior.

762
Hank Pete says that he has heard many threats of suicide and that peo- 626
ple do this, "to scare money from old parents." Pete also says that men at- 562
tempt suicide more often than women, who just leave home when interpersonal
difficulties arise. The destruction of the self is an ultimate threat, and the
fact that men are more likely to invoke it than women indicates a lack of male
authority in Washo culture. This same characteristic of the male role was
revealed in an analysis of role behavior by kinsmen among the modern Washo.
"... Men tend to see their relationships regarding who dominates them as
clearly structured, but are much less clear as to whom they dominate; women
see their relationship with subordinate relatives to be structured almost as
clearly as their relationships with dominant ones. This may be an indication [157]
that Washo males tend to lack self-confidence...." (Freed, 1960, 370). We
believe that the lack of male self-confidence is a modern phenomenon and can-
not be projected into the past. The reason probably is that males have a more [157]
difficult time adjusting to modern conditions than women. This has been noted
in other American Indian hunting-gathering tribes (Hallowell, 1942, 48;
Caudill, 1949, 425). In the case of the Washo, the main difficulties of the men
may be due to seasonal unemployment and lack of economic opportunities. Of
the five cases of violence against the self involving attempts at social control,
three were by men; of these three, two were motivated by complaints by wom-
en that a male relative was making no economic contribution.

762
We suspect that among the modern Washo the use of alcoholic beverages 273
has partially replaced the threat of suicide in interpersonal relations. Bertha 177
Holbrook commented, "Nobody commits suicide today -- instead they begin 626
drinking." Alcohol probably has many functions in modern Washo culture; its
role as a means to control the behavior of relatives is possibly a minor one.
If the control of relatives is one of the functions of alcohol, its effectiveness
is based on different culture patterns than is the effectiveness of suicide. Sui-
cide controls through the fear of ghosts; drinking may control through fear of
the direct aggression of the drunken person, especially because the Washo be-
come hostile and aggressive when they are drinking. It is possible that a per-
son may die from overindulgence in alcohol or may be killed in a drunken
brawl and thus become a ghost, but this is infrequent and therefore a minor
consideration.

"Individual Peyotists accuse one another of causing sickness or death under guidance of malicious spirits, or of secretly making use of Peyotist ritual, song, and medicine as a screen for acquiring personal advantage in 'the old way.'... Deaths of members or too-frequent failure to cure result in suspicion and the eventual rejection of a leader."

Again, Peyote singers carried on a rivalry with one another which "seems to be one means by which hostility is expressed among Peyotists" (Merriam and d'Azevedo, 1957, 625).

Peyotism, however, had failed to take hold, in Dresslerville at least, by the time of our field study. The members of this community did not appear to have had sufficient time to work out effective means for redirecting their aggressions in a socially acceptable manner.

Instead the aggression was internalized, the very thing that canalization is believed able to avoid.[2] This internalization was evident in certain self-destructive activities, though in each case the evidence was questionable and may be accepted only with qualification. Such evidence includes the high incidence of heavy drinking, though a comparative measure with the 1930's was lacking; the increasing harshness of the socialization process, though "taking it out" on one's children as an indication of internalized aggression is open to question; and a decreasing interest in tribal affairs, which could be interpreted as a lack of concern by the Washo about themselves and their future. The fact that many young men had left the community may also be an indication of internal conflicts that they were unable to resolve in any satisfactory manner. Suicide, of course, would have been a clear measure of such a conclusion, but, again, records were not available for comparison between the 1930's and the time of our study.

We can thus tentatively conclude, given the nature of our evidence, that Nadel's suggestion, that witchcraft beliefs impede the integration of a society and add to the stress of social life, does not appear to hold true for the Washo case.

In this paper, the cultural changes that took place among the Washo over a 15-year period were used to support the contention that witchcraft beliefs may fulfill a positive function in displacing aggressions. Support for this conclusion was drawn from the consequences of the elimination of "bad" shamans. We also attempted to demonstrate how education may be considered as an intervening variable between frustrations and the socially acceptable means for releasing aggressions. The significance of cultural transmission from one generation to the next has always been implicit in any

[2] [footnote appears on p. 66 -- Analyst]

TABLE I:

Mean Blood Pressures, by Age and Sex,
for Washo Indians

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Age	Males	N	Females	N
25 and below	124/79	(5)	119/78	(13)
26 - 45	137/90	(19)	122/78	(20)
46 - 65	133/89	(13)	146/88	(13)
66 and above	157/91	(8)	158/90	(9)
TOTAL	138/91	(45)	132/82	(55)

Nine variables were selected for analysis in terms of their relation to the presence or absence of hypertension. Six of the nine were associated with hypertension at, or better than, the 10% level of significance: 147 158 121

1. Age. Increasing age was associated with an increase in the percentage of elevated blood pressures.

2. Sex. Males have a higher percentage of elevated pressures than do females.

3. Obesity. Using standardized criteria the sample was divided into three groups: normal, overweight and obese. There was a significant increase in the percentage of elevated pressures from the normal to the overweight to the obese groups.

4. Education. The sample was divided into three groups: those who attended schools in the white community, those who attended boarding schools for Indians, and those who had not attended formal schools. The percentage of elevated pressures was highest in the first group and lowest in the last, the differences being statistically significant. No significant statistical association was found between blood pressure and amount of education. [871]

5. Alcoholism. Data were collected on 40 of the males as to whether they were observed by the authors to be frequently drinking or drunk, and whether or not certain key members of the community considered them to be "heavy drinkers." For purposes of analysis they were divided into two groups: [273]

147
158
[12]
[273]
[77]

alcoholic and nonalcoholic. The alcoholics were found to have a significantly higher percentage of elevated blood pressures than the nonalcoholics.

6. Religion. Members of the sample were questioned concerning their religious affiliation and were placed into three categories: none, Christian (mostly Baptist), and Peyotists. Though there was little difference in hypertension between the Christians and those with no preference, both groups had significantly more elevated pressures than the Peyotists. Three variables did not reach the 10% level of significance.

[177]

7. Residence. Of the three Washo communities studied it was felt that Dresslerville and Carson City represented the greatest degree of acculturation to the dominant white culture, and Woodfords the least. Assuming that stress accompanies acculturation (an assumption not always warranted), we predicted that Dresslerville and Carson City would have a higher prevalence of hypertension than would Woodfords. This was in fact the case but the differences among the three communities were not statistically significant. The prevalence of elevated diastolic blood pressure was 38% in Dresslerville and 39% in Carson City, whereas it was 28% in Woodfords.

[463]

8. Occupation. Hypertension was related neither to type of occupation (ranch workers or construction workers) nor to the difference between seasonal and full time employment.

[623]

9. Involvement in Tribal Council. Past and present office holders of the Washo Tribal Council showed a tendency to have a lower percentage of elevated pressures than other Washo, but this difference did not reach a level of statistical significance.

Because it was felt that some of the associations between elevated blood pressure and selected variables might be due to relationships among variables, a correlation matrix was computed for the six significant independent variables in addition to the dependent variable, elevated blood pressure. The six variables were again found to be significantly related to blood pressure at or beyond the 10% level. Of fourteen intercorrelations, three other sets of statistically significant relationships were found: sex with age, Peyotism with alcoholism and age with school type. Since the males were found to be older than the females this difference may account for the earlier finding of a male preponderance of hypertension. The correlation between Peyotism and alcoholism is negative, and is expected, since membership in the Peyote church is supposed to preclude drinking. Finally, the correlation of age with school type (younger Washo attended the white schools, and older Washo, no school) is also expected since "integrated" schools are a relatively recent innovation in Nevada. Nonetheless, since it had already been

147
158 The stress hypothesis gains additional support from the relationship of selected variables to hypertension. The six variables found to be significantly related to hypertension represent a mixed bag. Age, sex and obesity are biological variables for the most part, whereas religion, education and alcoholism are social. This is not surprising if one accepts the current view of hypertension as a multi-causal disease. Additionally, the kinds of associations found do not necessarily imply causation. A great deal more epidemiological research must be carried out before we can begin to understand the etiology of hypertension.

With regard to the specific variables studied, the relationships between sex, age, obesity and elevated blood pressure merely support similar findings in the great bulk of studies reported for other societies. The other three variables, however, are of greater interest, particularly as regards the stress hypothesis.

147
158 It has been indicated that attendance at white schools is positively as-
871 sociated with hypertension, in contrast to attendance at Indian boarding
648 schools, or no formal education at all. It can be argued that attending a white school is a stressful experience for a Washo and, extending the argument, that this stress later reflects itself in increasing blood pressure. Why is such schooling thought to be stressful? In the first place, several of those who have undergone this experience seem to feel it was. Several Washo have expressed bitterness, if not hostility, regarding the treatment they felt they received not only from the teachers of these schools but from the parents of fellow white students as well. It is of some incidental interest that in general these feelings did not extend to the white students themselves but only to their parents. This subjective evaluation of their educational experience seems warranted in the light of the objective situation. According to one white high school principal, Washo students, particularly in the past, did poorly in their studies in contrast to the white students. Furthermore, the principal corroborated the prejudiced feelings of white parents who, in his experience, had objected to the Washo's being allowed to attend the school in the first place, and have since objected to any sort of extracurricular activity that would allow the Washo to associate socially with white children. Interviews with members of the white communities of Minden and Gardnerville, the two white communities closest to Dresslerville, clearly indicate that for the most part these people do not have a high regard for the Washo and do not appreciate their attendance at the same schools. These indications seem to constitute a good case for the stressful nature of the educational experience.

147
158 Alcoholic behavior can be interpreted as stressful on two counts:
● 273 first as a reflection of underlying psychological stresses and anxieties, and second as generating further stress in the form of reaction from white and

Washo society. In other words, the fact that particular Washo become alcoholics indicates certain personality problems of a stressful nature. Once having become alcoholics they are faced with further problems. Other Washo tend to look down on the alcoholics, who then become the subject of malicious gossip for giving a "bad name" to the Washo. In this way, alcoholism, which has been shown to be related to hypertension, may seem to reflect stress.

In contrast to education in white schools and alcoholism, membership in the Peyote cult is seen to be related to normal blood pressures, or an absence of hypertension. Here one can speculate that membership in the Peyote movement tends to be stress-reducing. The psychological and social functions of reform movements such as Peyote have long been noted. For example, Voget (1956, 259) states that these movements:

> ". . . perform a number of important functions in the continuing development and adjustment of the Indian. By providing Indians with a legitimate base for the evaluation of Indian ways, a new dignity and self-confidence emerges. The sense of inferiority and unworthiness which grips the Indian gives way to a bolder and more confident outlook, and he is enabled to face contemporary issues without immobilizing anxiety."

Our own observations among the Washo support Voget's contention. The Washo Peyotists did appear more stable and considerably less anxious than non-Peyotists. Thus the finding that the Peyotists have significantly less hypertension than the other Washo is of some interest.

On the basis of the limited data presented above it may be stated in summary that (1) variables related to social stress are also related to hypertension, and that (2) variables related to attempts to counteract such stresses are also related to an absence of hypertension. This interpretation must, of course, be considered tentative, particularly in view of the failure to find significant relationships between hypertension and some of the variables thought to be important, such as type and continuity of employment.

Studies of social factors in hypertension are currently underway in several societies throughout the world. It is hoped that findings from these studies shed additional light on the nature of the relationship of culture to this disease.

giving, and the ritual and real breakfasts for the girl. This was again followed by a small feast for the close relatives about 15 days later. At the final feast the girl ate meat again and was eligible to marry. All informants agree that she was never actually married for some time after -- usually more than one year.

The girl's puberty ceremony today is clearly the most important social event among the Washo. However, many aspects of this custom have changed and many new elements have entered. The four fires are not made today "because of the fire hazard." In the summer the dance ground is usually sprayed with water to keep the dust down. Baskets are only rarely made and given out, and any steel bucket or pan is used to pour the water on the girl. The girl wears a slip when she is washed and the red paint is no longer applied to her, although the woman conducting the ceremony goes through the prayer sequence, brushing the girl with a cloth or sagebrush.

Except for the brief rituals involving the girl, the puberty ceremony today is much like a big family reunion and dance anywhere in modern rural America. Many people help to bring the food. They arrive in cars and trucks and are dressed in western American clothes. The dress of the older women is somewhat unique with their particular style of long full skirt, large shawl, and silk scarf worn over the head. This style of dress was apparently adopted from the local ranch women of the late 1800's and has changed little since.

Everyone speaks English most of the time. There is a lot of joking and talk among friends. A few young men may bring some wine or beer and pass it around to their friends. One or two may become intoxicated as the evening wears on, and, by dawn, "when they can see who they are hitting," may begin fighting. Most of the people disapprove of heavy drinking and fighting. For the most part the whole affair is run the way the middle-aged and old women want it to go.

A girl's puberty ceremony was held at the Dresslerville community Hall the evening and morning of July 19 and 20, 1961. A large stack of wood had been placed north of the Community Hall, a fire was built north of the woodpile, chairs were placed around the fire, and a dance ground about 60 ft. in dia. was wetted down with a hose north of the fire and chairs. The 27 cars and trucks present were parked along the road and part of the way around the dance ground.

People started coming to the hall at 8:30 p. m. to bring food and talk with their friends. The woman's dance began at 9:45. The poles used by the two girls, who danced in front of the swaying women, were just held in the hands of the girl and her assistant and were not placed in the ground. Several

14:Stewart E-5 (1936-1938)1944 NR13 Northern Paiute NR13
Washo NT20

peyotism because it takes the Indians away from the mission," thereby angering the missionary, who retaliates by giving no Christmas presents to any Indians.

Those who consider peyote a religion also believe it an ethical force. Dewey Charles (P,8) is certain that President Roosevelt has peyote in his room "because no one can face it and lie." Streeter Dick (P,5) confesses having been so bad that his wife left him, and says she returned when he accepted peyote and reformed. "Straight living," "charity," and "brotherliness" are the ethical ideals of the cult. Whether the members actually become better is questionable; they appear more charitable within the group but more cantankerous with outsiders.

At least seven affirm they affiliated expressly to stop drinking.[6] Don James (W,2) and Seymour Arnot (W,13), for example, antagonistic even after members of their families joined, reconsidered after a narrow escape from freezing to death while drunk. Emory Dick (P,8) accepted after his wife had left him because of his drunkenness. White and Indian opponents admit peyotism keeps its members from drinking, but they falsely accuse it of attracting only confirmed alcoholics. Although most peyotists, like the majority of Indians, drank prior to their conversions, the Smokeys, Kenos, Dyers, and others never were topers. The devotees' claim that peyote makes drinking whiskey impossible is equally unfounded, for several former members returned to drink, two admitting inebriation between meetings.[7] Peyotists do not drink, considering alcohol a poison the fumes of which may kill a sick person; also, they believe years of peyote-induced vomiting may be required to purify whiskey from the "system." Dr. Bambauer reported that some even refuse to use rubbing alcohol because of fear of contamination. A number of hallucinations convincingly portrayed the evils of whiskey.

Several reject peyote because they like whiskey; others refer to it as "just a cheap drunk"; another argument is that certain Indians have returned to whiskey after using peyote, which is supposed to destroy the taste for alcohol. Apparently, peyotism is shunned both because it stops drinking and because it does not. Another common objection is that peyote is a habit-forming drug, worse than whiskey.[8] Opponents allege that the nfirm feel better for a day or two, but "get bad again when the dope works off." They argue, "If they don't get the habit for peyote, why do they follow Ben around and go to meetings when they aren't sick?" One inferred that Ben holds the people until noon following an all-night meeting because he is afraid they will do something wrong while doped. Two reformed narcotic addicts declared that peyote was like other drugs, and would not touch it. A third asserted, "Its action is different and doesn't give you the habit."

There is also the idea among opponents that peyote meetings are sexual orgies or at least lead to such debauchery. Rumor, unconfirmed even by embittered former members, aroused suspicion among government officials that possibly aphrodisiacs were being used with peyote. For a year and a half, Ben was carefully watched and

[6] None of the 64 Baptist Mission members in "good standing" and only one of the 31 "active members" of the Fallon Reservation Mission in 1936 became peyotists. (Mission records examined.)

[7] La Barre did not state that Plains Indians became peyotists in order to stop drinking, but he did generalize that "it is . . . considered hygienically, if not ethically, unwise to use peyote in connection with alcoholic drinks; indeed many insist that the former cures addiction to the latter." But La Barre also reports (pp. 101–103) that a Sauk informant quit the cult because peyote "'gives you the same effect as whiskey.'"

[8] La Barre, 147, mentions instances in Oklahoma of a few peyotists getting drunk in spite of their belief they should not.

[9] La Barre, 148–150, reviews the evidence relative to the "possible ill effects or habit-forming nature of the drug," and concludes there is no great danger in its use. The fact that peyotists use it only periodically, once a week or once a month, plus the fact that many cease using it after taking it for years, proves that no physiological appetite is created.

14:Stewart E-5 (1936-1938)1944 NR13 Northern Paiute NR13
Washo NT20

TABLE 2—(*Continued*)

Tribe—(*Continued*)	Peyotists (percentage)
Chippewa (Leech Lake Agency)	5
Yanktonai Sioux (Lower Brule Agency)	0
Omaha (Omaha Agency)	90
Little Osage (Osage Agency)	50
Oto and Missouri (Oto Agency)	50
Pawnee (Pawnee Agency)	20
Northern Cheyenne, Brule Sioux (Pine Ridge Agency)	5
Kaw, Ponca, Tonkawa (Ponca Agency)	60
Prairie band of Potawatomi (Potawatomi Agency)	16
Rosebud Sioux (Rosebud Agency)	0.7
Eastern Shawnee, Otawa, Quapaw, Seneca, Wyandotte (Seneca Agency)	2
Absentee Shawnee, Mexican Kickapoo (Shawnee Agency)	10
North Arapaho, eastern band of Shoshoni (Shoshoni Agency)	7.5
Sisseton and Wahpeton Sioux (Sisseton Agency)	0
Capote and Moache Ute (Southern Ute Agency)	5[b]
Sioux (Standing Rock Agency)	0
Northern Cheyenne (Tongue River Agency)	35
Uinta, Uncompahgre, and White River Ute (Uinta and Ouray Agency)	50
Capote and Moache Ute (Ute Mountain Agency)	90[b]
Winnebago (Winnebago Agency)	33
Ponca, Santee Sioux, Yankton Sioux (Yankton Agency)	20

[b] Corrected by letter from S. F. Stacher, Superintendent, dated at Ignacio, Colorado, October 28, 1938, which agrees with personal observations made in January, 1938.

columns on the right contain total population figures and the number of converts in each community. Irregularity is the characteristic feature revealed by table 1.

Table 2, above, presents the available information on the percentage of the Indian population of various tribes and agencies who have become members of the peyote cult.

In the following table (table 3) the percentage of peyotists and nonpeyotists in the several cate-

[text continues on top of p. 125]

TABLE 3

PARTICIPATIONAL STATUSES AMONG 1000 INDIVIDUALS IN ANALYZED TOWNS AS OF NOVEMBER, 1938
(In percentages)

Categories	753 Nonpeyotists	247 Peyotists	247 Peyotists	
			88 Active	159 Inactive
Prosperous	5.3	5.7	10.2	3.8
Poor	3.4	4.1	3.4	4.4
Energetic	5.4	5.6	9.0	3.8
Lazy	2.8	3.6	4.5	3.0
Heavy drinkers	6.6	7.7	10.2	6.3
Never drink	1.7	2.0	3.4	1.3
Active Christians	6.0	4.4	4.5	4.4
Shamans	1.3	2.0	2.3	1.9
Councilmen	1.0	0.8	1.1	0.6
Mixed-bloods	13.1	10.9	5.7	13.8

14:Stewart E-5 (1936-1938)1944 NR13 Northern Paiute NR13
Washo NT20

gories, and the percentage of active and inactive peyotists as of November, 1938, are given. For example: Of the 753 individuals in the analyzed communities who opposed peyote, 5.3 per cent were prosperous; of the 247 who had joined the peyote cult (attended two or more meetings), 5.7 per cent were prosperous. Of the 88 active peyotists in November, 1938, 10.2 per cent were prosperous; and of the 159 apostate or inactive peyotists, 2.8 per cent were prosperous. There is some question about those listed as heavy drinkers. Most of those considered exceptional enough to be put in this category were the ones who landed in jail, except for certain peyotists who confessed to having been extremely intemperate. Peyotist former drunkards (self-styled) might not have used more

TABLE 5

OTHER PEYOTIST COMMUNITIES

(W, Washo; P, Paiute)

Categories	Carson City (W)	Nixon (P)	Schurz (P)	Bishop (P)	Woodfords (W)	Total by tribes (W)	Total by tribes (P)	Total
Total population	128	359	440	250	80	208	1049	1257
Active peyotists	—	13	—	4	6	6	17	23
Inactive peyotists	5	—	20	—	5	10	20	30
Nonpeyotists	123	346	420	246	69	192	1012	1204

The totals of tables 4 and 5 are combined in the following table (table 6).

TABLE 6

TOTALS OF ALL PEYOTIST COMMUNITIES

Categories	Total from analyzed towns	Total from unanalyzed towns	Total from all peyotist towns
Total population	1000	1257	2257
Active peyotists	88	23	111
Inactive peyotists	159	30	189
Nonpeyotists	753	1204	1957

liquor than others who were not singled out as being alcoholics. Those listed as heavy drinkers among the active peyotists stopped drinking when they joined the cult. This table indicates that peyotism has attracted a proportionate number of all the exceptional individuals in the Washo-Paiute community.

The results of an analysis, made November, 1938, of the principal communities where the peyote cult has attracted members are given in table 4 (opposite). Only persons fifteen years old or over are represented. The attitude of all Indians on official census rolls was determined by checking the rolls name by name with members and nonmembers, and by talking with most of those said to have been affiliated with the cult.

"Mixed-blood" includes all Indians listed on rolls as not full-bloods, besides a few whom the rolls listed as full-blood but whom the Indians said were mixed.

Peyotists, inactive, are those who had attended two or more peyote meetings, thus indicating more than curiosity, but who did not participate in cult rituals in November, 1938. Many were militantly opposed.

The totals of the adults of the five other communities where peyote meetings have been held are given in table 5 above. These figures are less exact than those in table 4 because the rolls were not checked. However, the names of peyotists were received from more than one source, and I contacted most of them.

The totals of tables 4 and 5 are combined in table 6.